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SASKATCHEWAN SOUR CHERRY MARKET ASSESSMENT

PRESENTED TO

THE SASKATCHEWAN FRUIT GROWERS ASSOCIATION

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Executive Summary

Sour cherry production in Saskatchewan is still in its infancy with existing producers' trees yet to reach maturity and new producers continuing to enter the industry. The Saskatchewan Fruit Growers Association (SFGA) contracted Meyers Norris Penny to assess the current sour cherry market and develop a marketing and industry development strategy for the Carmine Jewel and numbered varieties created by the University of Saskatchewan.

The differentiating qualities of the U of S varieties including dark red skin, red flesh, and higher sweetness, although attractive to consumers, add little value on the commodity market where processors are accustomed to adding sugar and dye to their products to compensate for the yellow flesh and tartness associated with common sour cherry varieties. Additionally, the commodity market is highly competitive and characterized by below cost of production pricing.

The niche market potential for the U of S sour cherry varieties is more positive. The capacity for organic production in Saskatchewan opens up more profitable markets as organic cherries are not readily available and organic production in other areas is very labour intensive. There is a strong regional market for the U of S varieties as a specialty ingredient with upper class restaurants and processors willing to pay a premium for the cherry due to its characteristics, possible organic availability, and accessibility. The nutraceutical/health industry is a growing market for sour cherries, especially organic, with current nutraceutical offerings focusing on juice concentrates and encapsulated cherry products. Value added opportunities are attainable through the use of these varieties as specialty ingredients in premium products.

Current and anticipated planting from existing producers could create a supply of almost 850,000 lbs of sour cherry production in Saskatchewan by 2016. Currently, Saskatchewan is not positioned to supply any substantial identified market until 2009 when approximately 300,000lbs of sour cherries will be produced. Within the next few years the processing infrastructure must grow through the acquisition and coordination of shakers, an individually quick frozen tunnel, and additional pitters (primarily punch pitters). Without the increase in processing capacity, much of the sour cherry crop will be unharvested or unmarketable.

Target markets are excited about the availability of a prairie sour cherry and the characteristics of these varieties, but producers' ability to consistently supply product will be a contentious issue. Prioritization of target markets based on price, access, size, and infrastructure requirements, matched with production and processing capability is required to maximize the success of the Saskatchewan sour cherries.

Current Market Assessment

The market for sour or tart cherries is an international market with product being harvested in Europe, the United States, and even the Middle East. In terms of volume, Russia, Poland, and Ukraine are the world's largest producers. Many of the traditional foods in these countries are cherry based including liqueurs and baked goods. The variety of sour cherry predominant in a market will vary by country. There is a focus on Montmorency cherries (an amarelle variety) in the USA while Poland produces almost exclusively morello, dark fleshed, varieties. As Table 1 illustrates, the top 20 producers of sour cherries in the world cover a wide geography, not to mention a wide disparity in production levels. As the 19th largest producer in the world Canada currently contributes less than 1% of the global production.

Table 1: Global Sour Cherry Production

Sour Cherries *Production (Mt)*	Year		Percent of World	
	2004	2005	2004	2005
World	1,297,384	1,209,240	100.0%	100.0%
Russian Federation	225,000	235,000	17.3%	19.4%
Poland	201,734	138,000	15.5%	11.4%
Ukraine	178,500	150,000	13.8%	12.4%
Turkey	138,000	140,000	10.6%	11.6%
Serbia and Montenegro	112,300	116,000	8.7%	9.6%
United States of America	96,616	98,000	7.4%	8.1%
Germany	80,000	80,000	6.2%	6.6%
Hungary	77,000	82,000	5.9%	6.8%
Iran, Islamic Rep of	51,000	51,000	3.9%	4.2%
Belarus	24,200	15,000	1.9%	1.2%
Czech Republic	19,877	6,500	1.5%	0.5%
Denmark	13,588	14,000	1.0%	1.2%
Albania	8,200	8,200	0.6%	0.7%
Croatia	7,500	7,500	0.6%	0.6%
Macedonia (Formerly Yugoslavia Republic)	7,324	7,300	0.6%	0.6%
Italy	6,000	5,500	0.5%	0.5%
Austria	4,960	4,500	0.4%	0.4%
Canada	4,527	4,040	0.3%	0.3%
Greece	3,500	3,500	0.3%	0.3%
Uzbekistan	3,500	3,500	0.3%	0.3%

Source: FAO Stat

Despite the fact that the USA is only the 6th largest producer of sour cherries in the world, they dominate the sour cherry industry in North America. As the closest cherry industry to Canada, the situation in the United States can have a significant impact on production in Canada. In the competitive American sour cherry market, producers are very large, and often have diversified orchards of Montmorency cherries, apples and other fruit. There is an over supply of sour cherry production in the USA and in recent years to improve prices, producers have voluntarily limited their production. This is a stereotypical commodity market where large volume transactions and small margins are the rule and purchasers have more pricing power than producers. While this does not necessarily mean that it should be avoided, unless Canadian producers are able to

produce comparable volumes at a lower cost they will find it difficult to enter and succeed in this market.

The American Tart Cherry Industry

The sour cherry industry in America has been extremely volatile over the last 5 years. Peak production levels resulted in market saturation to a point where some Michigan growers were receiving five cents a pound for the crop, far below the twenty-cents per pound needed to break even at the time. This level of oversupply lead the American government to establish the Cherry Industry Administration Board (CIAB), which was tasked with matching supply to demand to improve prices for producers and control the amount of product made available for marketing. Later, in 2002 and 2003 the Michigan crop was devastated by weather resulting in record low productions and a significant increase in imports from countries like Poland and even Canada. Michigan is the largest producer of sour cherries in the USA with approximately 200 to 250 million pounds of fruit being harvested a year.[1]

In the USA, the largest market for tart cherries is the food ingredient market. Producers are often involved in value added stages and receive additional payments based on production levels in the associated processing plants. The majority of product is sold either individually quick frozen (IQF) or packed in bulk with sugar (5+1 packs). The market for dried sour cherries is growing thanks in large part to similarities with the market development for dried fruit/berry products that has been implemented by cranberry producers.

Cherry Institutions in the United States

The cherry industry in the United States is supported by three organizations that some refer as the 'pillars' of the industry.[2] Other national support for the industry comes in the form of USDA purchases, which in 2003 were more than 52 million pounds.

[1] http://www.leelanau.cc/agriculture0015.asp Accessed. Dec 22, 2005
[2] http://www.fruitgrowersnews.com/pages/2001/issue01_04/01_04_cherry_outlook.html. Fruit Grower News. Accessed March 15, 2006.

Sour cherry growers in Michigan, New York, Oregon, Pennsylvania, Utah, Washington, and Wisconsin fall under the jurisdiction of the Cherry Industry Administrative Board (CIAB). "The purpose of the organization is to support the national red tart cherry industry and, ultimately, to improve prices paid to producers for their cherries."[3] CIAB requires processors of cherries from states producing more than 15 million pounds of cherries to divert cherries from the market in years of surplus production to control volume. Growers participate in the federal marketing order with CIAB through their processors. Surplus product is diverted from the market either in the orchard, at the plant, or through alternative markets such as food bank donations, exportation, and new product development.[4]

As an illustration of CIAB involvement, in 2005, 52 percent of that year's sour cherry production was declared 'free' by CIAB indicating that 52 percent of total production would be marketed without reservation, while the remaining 48 percent would have to be kept as inventory or marketed in designated markets.[5] In determining the ratio of free and restricted tonnage, CIAB considers the projected national crop, average annual volume of sales of tart cherry products, the carry-in of product into the current year, and the desirable carry-out of product for the following season.[6]

CherrCo's role is to manage inventories, invoices, collect funds, and disperse funds back to members. The involvement of CherrCo in the American cherry industry is one of the reasons that tart cherry prices have risen from below cost of production values. In 2004, "CherrCo members included 28 grower cooperatives across North America including four from Ontario. CherrCo represents 75%-80% of the market for frozen and canned tart cherries, not fresh or specialized products. CherrCo establishes prices in the market for frozen and canned processing products. All product is then sold based upon the agreed upon price. Members are charged a fee based on sales."[7]

[3] http://www.cherryboard.org/ Accessed Feb 27, 2006
[4] http://www.cherryboard.org/ Accessed Feb 27, 2006
[5] http://www.cherryboard.org/ Accessed Feb 27, 2006
[6] http://www.fruitgrowersnews.com/pages/2001/issue01_04/01_04_cherry_outlook.html. Fruit Grower News. Accessed March 15, 2006.
[7] http://www.fruitgrowersnews.com/pages/2001/issue01_04/01_04_cherry_outlook.html. Fruit Grower News. Accessed March 15, 2006.

Cherry Marketing Institute (CMI) is a "national research and promotion organization that represents U.S. tart cherry growers."[8] This organization is funded through the proceeds of a check-off charged to tart cherry growers. CMI is involved in product development, market research, trade shows, product specification sheets, and more. Through the efforts of the CMI, American producers have gained entry to the German bakery market and are provided access to ideas for how to target restaurant menus, recipes to restaurant use, nutritional information and research results, and educational material for use in schools among other things.

The Canadian Tart Cherry Industry

In Canada, the largest tart cherry producing provinces are Ontario and British Columbia. In 2003 British Columbian producers sold 2.6 million pounds of sour cherries while Ontario producers yielded 7,940 tons (approximately 16 million pounds) according to 2005 statistics.[9] A substantial portion of the Ontario harvest is marketed through CherrCo in the United States. However, according to the Ontario Tender Fruit Producers website, despite the fact that the sale of Ontario cherries are not restricted, "the sale of finished product has been challenging and the industry is struggling to find alternative non-traditional markets (nutraceuticals, dried cherries, trail mix). The industry market development fund will be used if and when new market development projects can be initiated."[10] In an earlier newsletter from the Ontario Tender Fruit Producers, the website noted that,

> "Marketing the 2005 cherry crop continues to be a challenge both in Canada and the U.S. This can be attributed to a number of factors.
> - The large North American crop in 2005.
> - An estimated loss of sales volume of about one third as a result of the inability to supply the market during 2002 – 2004 due to smaller than average crops in North America. Prices soared during that period and buyers turned to alternate sources (Eastern Europe) and/or reformulated their products to utilize fewer cherries. Regaining American markets and market share will be a challenge.
> - USDA purchases in the U.S. have been less than adequate to deal with excess volume.
>
> In Canada, we are feeling the same pressures as noted above. Polish cherries have gained in Canadian market share and exports to the U.S. have all but dried up as there are ample supplies of U.S. cherries to meet their demand. As well, the shift of the E.D. Smith pie fill line to

[8] http://www.cherrymkt.org/. Accessed Feb 27, 2006.
[9] http://www.ontariotenderfruit.ca/newsletters/2005_09_27/default.shtm#sour-cherry. Accessed March 16, 2006.
[10] http://www.ontariotenderfruit.ca/newsletters/2005_09_27/default.shtm#sour-cherry. Accessed March 15, 2006.

> Michigan has left a massive hole in the domestic demand. Imports into Canada for 2005 amounted to approximately 7 million pounds (mostly IQF and Elliott pitted) not including pie fill."[11]

For detailed information about sour cherry pricing in the United States see the Appendix.

The Sour Cherry Industry in the Canadian Prairies

Based on producer interviews, it appears that there are very few producers growing the Carmine Jewel or U of S numbered varieties of sour cherries in Alberta or Manitoba (and none at a commercial level). Our research indicates that even in Saskatchewan there are less than 50 operations currently growing these sour cherry varieties. Many of these producers have small ¼ to 1-acre orchards that they intend to use for U-Pick operations, which means that for the purposes of estimating potential production for commercial use, they should likely not be included. The largest operators in the province have 3,000- 4,000 plants and although very few of the orchards in the province have mature plantings, some operators have been able to harvest a reasonable amount of fruit in the 4th year.

Fruit that has been harvested in Saskatchewan has been used in a wide variety of applications. Some producers are working on value added products – from pie fillings to spreads, chocolate covered cherries, and cherry crumbles, while other harvested products have been used for tests at distilleries, and in menu items at local restaurants.

Throughout the course of this research there have been many comparisons made between the development of a sour cherry industry in the prairies and the development process of the saskatoon berry industry. While there is value in considering the development process and the different 'stages' in development, saskatoons were a completely new product and flavour in most of the markets that they endeavoured to enter, and this presented a unique set of opportunities and challenges. Cherries are not a new concept nor are they a new flavour in most of the world, which means that the marketing of sour cherries comes with inherent advantages and disadvantages in comparison to saskatoon berries. There is less effort required to market a sour cherry as a

[11] http://www.ontariotenderfruit.ca/newsletters/2006_01_31/default.shtm#5. Accessed March 14, 2006.

commodity because there are already grading and marketing systems established, but more effort will be needed to market a differentiated product commanding a price premium.

According to one local producer, his product sells itself because of its superior flavour in comparison to traditional cherry products. While this speaks to the quality of the product, it could indicate a large 'sample distribution cost' for producers looking to develop a name for themselves and for Saskatchewan sour cherries.

Uses for Tart Cherries

The uses for tart cherries range from the usual to very unique applications. The following is a list of tart cherries uses that we have come across in our research:

- jam
- spread
- pie filling
- salsa
- syrup
- juice (nutraceutical)
- capsules (nutraceutical)
- dried
- infused
- brandy
- kirsh
- wine
- sausage, burgers, jerky and other meat products
- cherry pit 'wheat' bags
- cherry oil
- cherry flavouring
- food colouring
- cherry muffins
- cherry pie
- chocolate covered cherries
- chocolate dried cherries
- IQF
- 5+1
- puree
- cherry and pepper jelly
- canned cherries
- cherries in juice
- cherry concentrate
- cherry Victorian crèmes
- BBQ sauce
- butter
- mustard
- honey
- vinegar
- vinaigrette
- trail mix
- crackers
- candies
- beverages and pop

- bath and home products
- fudge sauce
- hot sauce
- brandied cherries
- cakes
- cabernet preserves
- preserves for cheese
- abrasive agent (ground pits)
- marzipan replacement (pit interior)
- russian imperial tea
- strudel
- yoghurt
- ice cream

In a different use than those outlined above, researchers in Italy are working on developing a system for producing in vitro anthocyanins from tissue of sour cherry by determining what factors cause the biosynthesis of anthocyanins in sour cherry calluses and cell cultures.[12] This would result in a purely nutraceutical product.

Competitors

A product such as sour cherries will face competition from a number of angles. Most obviously sour cherry producers in Saskatchewan will face competition nationally from sour cherry producers in British Columbia and Ontario, and also from American cherry producer' whose products or value added products may be exported into Canadian markets.

International competition will come from imported value added products, which will likely only survive in the Canadian market so long as those countries are lower cost producers than Canadian and Saskatchewan sour cherry producers, or the imported products are novel and not available otherwise. (See Appendix)

In the North American market significant competition will come from CherrCo. and more specifically producers in Michigan and Ontario. As a result of their almost complete control of US and in some cases Canadian production CherrCo is a dominant force in the industry. However, as will be discussed later in this document, the cherry industry in the USA is largely commodity focused,

[12] http://www.ispa.cnr.it/eng/index.php?file=tematica&ID=50. Accessed March 16, 2005.

creating value through volume as opposed to margins. Producers interested in capitalizing on specialty or niche markets will have less interaction with this competitor.

Primary competitors that need to be considered are producers of other fruit products that would be substitutes for sour cherries. The ability of other fruits to serve as substitutes would depend to a degree on the market, but could include blueberries, cranberries, and saskatoon berries.

Desired Points of Differentiation

The characteristics that buyers of sour cherries prefer will vary depending on how they intend to use the product. Commodity markets will choose product based on cost because of the small margins characteristic of these markets. However, niche and gourmet markets will prefer the dark colour of the Carmine Jewel, but likely most attractive to these markets will be the ability of this product to be produced under organic production standards.

According to local processors, the three characteristics that would most impact their decision to purchase or not purchase local cherries are quality, price and consistency. As outlined earlier the market price for sour cherries is very low, and in the past, American prices have even dropped below cost of production. This would indicate that the characteristics of colour, flavour and brix that make this cherry a good prospect for gourmet markets are not as attractive for the processing market.

Gourmet markets require taste, but the combination of a dark red colour, and lower requirements for sugar to be added are also attractive for these markets. These characteristics combined with the potential for organic production make the U of S sour cherries an attractive option for high end restaurants.

Prices

Current prices for sour cherries in Ontario match that of international commodity prices (as detailed in the Appendix), however, it is important to consider that in some market segments there are opportunities to capitalize on a more significant profit margin.

Interviews with producers in Saskatchewan indicated that U-Pick operations were charging a range of prices for their product from $8 to $15 for a 4L pail. Producers who were selling to value-added markets were charging up to $2 a pound for their frozen product, which in some cases was not even pitted. However, as production grows it is likely that buyers will begin to require minimum levels of processing ie) product will have to be sold pitted and frozen. Finally, on the highest end of the price spectrum, our interviews with chefs uncovered one chef who had recently purchased 10L of frozen sour cherries for $40, which he noted was at the highest end of his price limit. Unfortunately that margin was not passed on to a local producer as this chef was unaware that sour cherries could be produced in Saskatchewan and purchased his ingredients from outside the province.

Prairie Capabilities

Production

The Carmine Jewel has already proven itself to be a hardy and low maintenance cherry and the numbered varieties are poised to follow that lead. Early plantings are yielding well, but most still have a few more years to reach maturity when each plant will produce approximately 20lbs of cherries. An exhaustive survey of current producers allows maximum production modeling based on previous and planned plantings and also revealed three essential target markets. The smallest producers are focused on plantings for their own use and anticipated very limited local marketing of their cherries if at all. A second tier of producers has planted to facilitate un-mechanized picking (plants closer together with narrower rows). The third tier of producer is gearing up for larger scale mechanized picking with some integration into a current local or regional supply chain. Supply quickly ramps up over the next ten years with total production reaching 845,400 lbs by 2016 with existing and planned plantings from current producers. This total does not include additional plantings by any new sour cherry producers.

The available sour cherry production numbers reflect a realistic level of participation (a maximum of forty percent) in pooled marketing efforts based on experience in other fruit organizations. Remaining production will already be dedicated to u-pick operations, integrated into other supply chains, or held out for personal reasons.

The production estimate was calculated based on anticipated yields as the trees mature with no yield until Year Four when fifteen percent of the mature level 20lbs per tree or 3 pounds will be realized. Year Five yields twenty-three percent of the mature tree or 4.6 pounds, Year Six yields fifty percent of the mature tree or 10 pounds, Year Seven yields eighty percent of the mature tree or 16 pounds, and the tree reaches maturity in Year Eight yielding 20 pounds.

Sour Cherry Production in Saskatchewan

Assumption: where only acres were provided planting density is estmated at 600 plants per acre as per Cherry Manual

Shrub Plantings by Year

	1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Producer 1				300							
Producer 2			1000					*600*	*600*		
Producer 3				40			100				
Producer 4				5			20				
Producer 5			220								
Producer 6		175									
Producer 7			2000								
Producer 8			3000								
Producer 9	325										
Producer 10					600						
Producer 11					600						
Producer 12		4000						*2400*	*2400*	*2400*	
Producer 13						300					
Producer 14			200								
Producer 15			700					*900*	*900*	*900*	*900*
Producer 16			400				600				
Producer 17		400		1200	1200						
Producer 1	100										
Producer 19					100			*900*	*900*	*900*	*900*
Producer 20					600						
Producer 21				2700				*1000*	*1000*	*1000*	*1000*
Producer 22				75							
Producer 23					3000			300	300		
Producer 24			350								
Producer 25					80						
Producer 26					120						
Total Sask	**425**	**4575**	**7870**	**4320**	**6300**	**300**	**720**	**6100**	**6100**	**5200**	**2800**

Estimated Potential Yield

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Sask	48,905	101,712	199,172	299,000	393,060	469,212	528,160	591,980	681,120	774,680	845,400
Available (	19,562	40,685	79,669	119,600	157,224	187,685	211,264	236,792	272,448	309,872	338,160

Processing

Current levels of cherry processing in Saskatchewan are possible without large fixed costs as the infrastructure exists today to process other fruits such as Saskatoon berries that have different harvest times. Cherry processing occurs in late July or early August before the Saskatoon berry season. The key piece of equipment required for commercial processing still unavailable in Saskatchewan is an IQF Tunnel (Individually Quick Frozen). Other equipment required includes shakers and reefer trucks which are currently available on a per acre or time usage basis. Further processing into other products could be integrated into other production systems mostly within the Province over the upcoming two to three years.

The forecasted growth of the industry, however, quickly outstrips available processing resources and will require the aforementioned IQF tunnel and cherry pitters to ensure that harvest is not lost due to a lack of availability of infrastructure (most likely punch pitters although some processing will

make use of rolled pitters). The demand for shakers will also be of concern as producers of other crops may not be willing to lease them out for fear of damage preventing harvest of their own crops, or the equipment not returning in time for their own harvests.

Strengths, Weaknesses, Opportunities, Threats

Strengths

Easy to establish organic orchards

- Larger distance between orchards lowers spread of disease and pests
- More available organic land base
- Climate minimizes pest impact

Hardy plant anticipated to produce above traditional Michigan levels of 7000lbs per acre

Cost of land base compared to other North American cherry producing areas

May create cost advantage given economies of scale

Carmine Jewel differentiators:

- Dark skin
- Red Flesh
- Higher BRIX
- Potential for higher anti-oxidants

Early adopters include entrepreneurs with leadership capabilities

Weaknesses

Industry not established in Saskatchewan – Fruit crop infrastructure not established compared to Ontario and British Columbia

Fruit farming support systems not as established as other Provinces

No marketing infrastructure at regional, national and international levels

No long term plan set for production – production needs to match future marketing requirements

Lack of specialized processing equipment (including pitters, IQF tunnels, and shakers)

First plants not fully mature

Specifications and analysis not fully developed

Opportunities

Organic demand for cherries – Brokers will accommodate product

Specialized ingredient demand especially regional market with restaurants and niche manufacturers (Savoury Island Pie Company)

Potential for multiple niche markets – Organic Kosher Chocolate Cherries, Cherry Liqueurs

Health Food and Natural Industry – Premium market for organic/dried

Cherry orchards in Michigan selling for recreation land

Cherry orchards in British Columbia converted to vineyards

International markets dependent upon cost of labour for cost advantage

Most North American sour cherry producers unable to replant orchards due to cash flow issues

Threats

Sour (tart) cherry market is generally oversupplied and International players continue to plant more

American producers have strong influence in market through large cherry cooperatives and marketing boards

American Federal Government supports industry through massive purchases

American Federal and State Government could introduce subsidies to replant cherry orchard to new varieties

GF120 – inexpensive and effective organically approved pesticide makes organic cherry production possible in current cherry producing states and provinces

New varieties with similar characteristics could be introduced into new markets with labour cost advantages

Value Chain (Players)

The existing sour cherry market is a large commodity market. The value chain is established by large multinational food processors and the pricing is determined by low cost producers. A superior product does not capture a significant premium as most sour cherries are processed further with additional sugar and dye to meet consumers' taste and appearance expectations. This market should not be of interest to Saskatchewan's cherry producers.

The Saskatchewan value chain for the Carmine Jewel cherry is likely to develop from the use of the cherry has a premium food ingredient into a premium food product with chocolates and liqueurs

probable initial products. Regional jams, spread, and pie fillings may also appear, but are unlikely to have a significant impact in the marketplace due to the high competition for shelf space.

As in the Saskatoon berry market, it is probable that some of the initial cherry producers will work to develop markets for their fruits and products and then move to buy from other producers as markets expand.

Market Trends and Industry Outlook

Market Outlook

Sour cherry production continues to increase with Russia and Poland as the largest producers. Following poor cherry crops in 2003 and 2004, international producers, especially Poland, captured market share in North America and domestic producers have been unable to regain share. As the largest producers have both land base and labour cost advantages, it is unlikely that there will be profitability in the commodity market for most North American producers. There has been a large movement toward value added processing by existing North American producers unwilling to continue sales of raw product below cost.

Emerging Markets

Organic and health food markets are the biggest source of new growth for cherry producers. As cherries are among the most chemically exposed fruits and are difficult to grow organically, the organic market create a premium that may be easily captured by Saskatchewan growers. The believe that cherries contain high levels of antioxidants and other health boosters has fuelled their growth in dried and fresh forms in the health food industry.

Import/Export

Outside of regional markets, only value added processing or organic product is attractive. To bring Carmine Jewel cherries to the commodity markets will eliminate the product differentiation enjoyed in premium markets.

Barriers to Entry

As referenced in the SWOT, the Saskatchewan market is not mature. There is low production and limited infrastructure capacity. A marketing and production strategy has yet to be established. The Saskatchewan infrastructure is not set up to move frozen cherries to major markets and major markets are not aware of Saskatchewan as a cherry producer.

Economies of Scale

Sour cherry production costs are reduced through economies of scale in all producing countries. In North America, higher labour costs have increased mechanization, and the resulting higher capital costs have encouraged larger orchards. In other markets where manual labour is less costly, economies of scale have a less pronounced effect. In Canada, larger orchards will still enjoy economies of scales as mechanization will likely be pursued by growers of ten acres or larger. A preliminary cost of production analysis is attached in the Appendix.

Target Markets

Regional Markets

Market Size:	Not defined. Includes U-picks, kitchen processing (jams, pie fillings, pastries, and chocolates), and local restaurants. Market size will be restricted by ability to deliver consistently as needed (restaurants) and compete in an already well supplied "farmers market" market.
Returns:	Varies widely with well marketed organic cherry pies garnering up to $25 for each regular sized pie and some local chef willing to pay $2.00/lb for IQF.
Access:	Similar to restaurant market. Includes exhibitions, trade shows, and farmers markets, and will require relationship development, and time investment.
Competition:	Direct and indirect with some pricing sensitivity due to grocery store comparatives. In many of these markets cherries are substitutable with a variety of other fruits.
Stability:	Traditional market perceived as higher quality and fresher, however restaurant markets are dynamic and trendy and not stable.
Barriers to Entry:	Long hours, entrance fees, one-on one selling, small batch production, small average sale.

Gourmet – National Reach

Market Size:	Substantial market with gourmet restaurants in major Western Canadian cities indicating that they would use 10 lbs a month. This market could very easily reach (200 restaurants * 20 lbs a month * 12 months) 48,000lbs a year.
Returns:	The profit margins in this sector are good as long as the product remains at least somewhat exclusive. As soon as the flavour or name becomes 'common' the market will shrink and the margins will narrow.
Access:	Not the most difficult market to access, some gourmet restaurants will respond very well to a simple visit and sample of the product so long as it comes with desirable attributes (eg organic or regional) and provided that it is GUARANTEED to be available when they need it. This is not a market that can be 'shorted' and it will be most successful when approached as a 'high maintenance' client.
Competition:	Competitors in this market are difficult to estimate as they will change in different regions, however, although the gourmet market is attractive because of the possibility of margins, the amount of relationship building that is required may be a deterrent for producers who are looking to be less directly involved in sales. One of the advantages of this market is that chefs in these niches prefer small producers and regional products and so there is less competition from chain food ingredient suppliers.
Stability:	As outlined earlier this is a trendy market and if the product becomes easily attainable by less exclusive locations it may lose some of its attraction. As with any trendy market it may be important for the producer to stay aware of food trends and continuously consider ways to fit their product into those menus.
Barriers to Entry:	Very few barriers to entry, which makes this attractive to enter for a variety of products – there will be competitors.

Processed Product – Regional or National Reach

Market Size:	Depending on the reach (regional or national) of the product, this can be a very sizeable market. One example is Last Mountain Berry Farms who are selling processed Saskatoon Berry and other fruit products through large retail chains like Loblaws.
Returns:	As producers move further up the value chain there are greater and greater margins available.
Access:	More difficult because of the capital investment required and the number of competitors. Also difficult because of challenges related to acquiring shelf space and working with retailers who have substantial market power.
Competition:	Significant because of the ease with which these products can move within and between countries. Includes very large firms like E.D. Smith and companies from overseas.
Stability:	Very stable, if you are able to get into the market and develop market share.
Barriers to Entry:	Significant. Including access to processing, access to capital, marketing resources required and international competition.

Food Ingredient – Regional or National Reach

Market Size:	Significant because of the reach and size of large food ingredient companies – like Sysco or BridgeBrand, but difficult to break into with largest suppliers.
Returns:	Smaller because the distributor will take a portion of the selling price and the product becomes less differentiable and more like a commodity
Access:	Not as difficult. As other sectors with small distributions and current product lines because of the lack of other local cherry production. This is also more accessible because of the awareness of cherries as an ingredient and a flavour.
Competition:	Significant, in terms of competition from other types of fruit. Any fruit product is competing for the attention of end users and distributor space. However, as mentioned above, there is little competition from other local cherry producers.
Stability:	Once you gain access and market share, this is a fairly stable market.
Barriers to Entry:	For Saskatchewan producers the largest barrier to entry will be the volumes required to fulfill the demands of this market. If producers are unable to consistently meet the volumes required it is likely that they will not remain suppliers. Extremely unforgiving changes in production. Experience of US sour cherry producers in 2003 and 2009, quickly switched supplier and to other fruits.

International Markets

Market Size:	Limitless. Some of these markets require samples of 25,000lbs just to test products and possibly more to test markets. Last year more than 320,000 lbs of frozen saskatoon berries were exported to the UK for use as food ingredients. It would be difficult for all of the current sour cherry producers in Saskatchewan combined to reach this level of production in 7 years.
Returns:	Not the largest per unit, but because of the volume involved the profit potential is still substantial. Requires economies of scale to be successful.
Access:	The most difficult, also requires the greatest loss of 'power' as the brokers and distributors in these markets are some of the worlds largest. However, if producers have a product that is attractive to then end market, it is possible to work with brokers to develop a position in this market.
Competition:	Also limitless – every other cherry producer in the world is a potential competitor, especially producers in the temperate areas of Europe including Poland and Germany and large scale producers such asTurkey.
Stability:	These segments will be reliant upon and impacted by consumer trends.
Barriers to Entry:	The volume required to fulfill the demands of this market will be a significant barrier to entry. One industry expert suggests that it is unlikely that one market segment will be able to attract more than 40% of a provinces production to fill their needs. If the demand for sour cherries from the Prairies were 320,000 lbs that would indicate a required production level of close to half a million pounds.

Organic Markets

Market Size:	Not defined. The Organic food industry has been growing at 20% annually, but there previously has been little capacity to grow organic cherries due to the cherry fly.
Returns:	Stronger than the commodity market, but much stronger with some processing such as drying. Fresh at approximately $.65US per pound. Organic dried cherries range from $8.95 to $13US for 8 ounces, 3lbs at $47 to $50US, and $112US for 10 pounds.
Access:	Will require some focused marketing at organic trade shows and with organic stores such as Whole Foods. The darker colour and higher natural sweetness will add a competitive edge.
Competition:	Organic growers in other areas now have access to GF120 an organic pesticide (cherry fly bait) that is inexpensive and effective.
Stability:	Continues to grow.
Barriers to Entry:	Market demand continues to outstrip supply increasing access for new suppliers.

http://www.mlui.org/growthmanagement/fullarticle.asp?fileid=16539

Nutraceutical Markets

Market Size:	Not defined for cherries but increasing in size at 7-10% annually in North America.
Returns:	$18.95 for Tart Cherry capsules containing 425mg of tart cherry in each capsule. 2 capsules recommended daily with 60 in each container. Similar to organic markets with crossover in functional foods.
Access:	Similar marketing to organic, but specific research on health benefits of the Carmine Jewel cherry could lead to strong sales as viral marketing is very strong in this industry.
Competition:	Other cherry and fruit products with similar benefits.
Stability:	Continues to grow, but affected by new FDA legislation against unresearched claims. Regulations affecting the market are likely to reward substandard product.
Barriers to Entry:	Similar to organic and possible to overcome with Carmine Jewel specific product information

http://www.traversebayfarms.com/tartcherry.htm

Summary

The sour cherry industry in Saskatchewan is in its infancy with the majority of producers having plantings that are yet to reach maturity. While this presents challenges in terms of available markets, it provides significant opportunities for product development, consumer research and general industry development.

Opportunities that currently exist for Saskatchewan sour cherries include regional markets, gourmet markets and organic markets. These markets are good targets at this point in industry development because of the level of production that they require, their accessibility, barriers to entry and the things that can be learned from involvement in them while providing a reasonable rate of return. Of the three, regional markets are likely the most forgiving.

At this point in the process it is evident that cost of production and access to markets will not be a problem for sour cherry producers in the prairies. There is merit in spending some time at this point deliberating the level of involvement that producers are interested in having in other parts of the value chain and in larger and more complex markets. While this does not intimate a need for all producers to agree on a single strategy, it will provide a choice of end-goals that will allow the creation of an industry development strategy that addresses the different interests or objectives of producers. The advantage of establishing an industry strategy at this point is that it will allow producers to focus their efforts and prevent a 'shot-gun' approach to development.

APPENDICES AND ADDITIONAL INFORMATION

Interview Results

There is value in learning from the lessons of others. One of the interviews conducted in the course of our research was with an individual who had been involved in a fruit processing business that was unsuccessful. Other advice was provided from experts in various parts of the industry. Pertinent portions of their advice is outlined below:

- do a lot of consumer research and listen to what it tells you
- you have to be able to 'hit the ground running' when your product becomes popular so start small and learn as you go so you are ready to scale up quickly when the time comes
- do your homework with product development
- make sure that you know who you are marketing to and cater to their demands with your product
    - know who they are
    - know where they are
    - know what attributes they desire
- product marketing is not something that can be done as an organization. This requires a champion, time and dedication.

We know that the idea of a marketing board has been tossed around by members of the SFGA. While the use of a check-off for marketing has been successful in the wild blueberry industry, we question the value of creating an organization that would essentially attempt to do what the Cherry Marketing Institute in the United States is already doing. They have a substantial budget and years of expertise. It may be more cost effective to take advantage of the CMI's resources while dedicating local resources to promotional activities within specific sectors, starting with local opportunities.

Sour Cherry Pricing Information From Ontario Tender Fruit Producers

Red Tart Cherry Pricing ($/ton)

Score	2004	2003	2002
97-100	940	1080	1460
95-96	920	1060	1440
93-94	900	1040	1420
Base - 92	880	1020	1400
90-91	860	1000	1380
88-89	840	980	1360
85-87	820	960	1340
80-84	800	940	1320
75-79	780	920	1300
70-74	760	900	1280
69 and below	740	880	1260
Ungraded	960	1080	1460
Wine/Distilling	-	1020	1400

Sour Cherry Prices 2005

The Sour Cherry Advisory Committee met on July 12, 2005 to negotiate the prices and terms and conditions of sale for the 2005 sour cherry crop. In the discussions, it was noted that the 2005 crop, estimated at 13 million pounds was the larges Ontario crop in recent years. The U.S. crop at 244 million pounds is up sharply from the 210 million pounds harvested last year. The carry over from the 2004 crop is 39 million pounds also up sharply from last year's carry in but still deemed manageable. The CherrCo price for 9+1 cherries for 2005 is 71¢ U.S. per lb. down from 76¢ U.S. per lb. at pack time last year. In Canadian funds, using exchange rates at pack time in each year, the CherrCo prices for 9+1 cherries for 2005 is 86¢ per lb compared to $1.01 per lb. at pack time in 2004. This is a reduction of 15¢ per lb year over year. The processors also noted increased costs for sugar and pails this season. Combined these factors resulted in a reduction in the Ontario grower price from 44¢ per lb. for 92 score in 2004 to 30¢ per lb. for the 2005 crop. The processors committed to purchase the entire crop at that price.

Score	$ Per Ton – 2005	$ Per Ton – 2004
97, 98, 99 and 100	660.00	940.00
95 and 96	640.00	920.00
93 and 94	620.00	900.00
92	600.00	880.00
90 and 91	580.00	860.00
88 and 89	560.00	840.00
85, 86 and 87	540.00	820.00
80, 81, 82, 83, and 84	520.00	800.00
75, 76, 77, 78 and 79	500.00	780.00
70, 71, 72, 73 and 74	480.00	760.00
69 and below	460.00	740.00
Ungraded	660.00	940.00
No. 1 Grade for Distilling	600.00	880.00

Terms and Conditions of Sale

• **Producer Licence Fees** - $20.25 per ton plus GST – Includes $ .25 per ton promotion fee for the Chilled Pitted Cherry program and a $10.00 per ton grower contribution towards a new Sour Cherry Market development Fund. The processors have also committed to match the grower contribution. Details of the new fund are as follows:

NEW – Sour Cherry Market Development Fund

Part 1 - ½¢ per lb. grower licence fee ($10 per ton included above)
- ½¢ per lb. processor check-off ($10 per ton)
Part 2 - **If Deeded Necessary** – An additional
- ½¢ per lb. grower licence fee ($10 per ton)
- ½¢ per lb. processor check-off ($10 per ton)

This new fund will be used to finance the cost of mutually agreed upon market development projects designed to generate addition sales of cherries and cherry products. If this fund is not utilized, it will be rebated to the producers and processors.

Processor check-off to support the Chilled Pitted Promotion Program – $ .25 per ton. In addition, participating processors will be assessed a charge per pail based on sales. Amount to be determined.

• **Payment Dates - Cherries**

September 15, 2005 25%
December 15, 2005 25%
March 15, 2006 25%
June 15, 2006 25%

• Payment Dates for Producer Licence Fees & Processor Check-offs

Chilled Pitted Cherry Promotion Processor Check-off

• (¢ per pail) due September 15, 2005
• 25¢ per ton processor check-off due December 15, 2005

Sour Cherry Market Development Fund Processor Check-off

- $10.00 per ton due December 15, 2005

Note: A maximum of an additional $10.00 per ton may be assessed based on agreement with the processors and the Board. Amount and payment date to be determined.

Producer Licence Fees - Due December 15, 2005

Base Fee $10.00 per ton

Chilled Pitted Cherry Promotion $ .25 per ton

Market Development Fund $10.00 per ton

Total $20.25 per ton

Note: A maximum of an additional $10.00 per ton Producer Licence Fee may be assessed based on agreement with the processors and the Board. Amount and payment date to be determined.

http://www.ontariotenderfruit.ca/pricing/cherry.shtm

Examples of International Sour Cherry Products

http://www.seacoastonline.com/2005news/exeter/08262005/currents/59798.htm

Specialty food shop found inside C'est Cheese

"...There are also juices that are very uncommon here. Black currant is popular in Europe and on the shelf at Bolshoi, as well as sour cherry.

"Sour cherry is good for you," says Lvin. "The folklore says it's good for your joints, and we have a customer who says it's already helping."

Jars of pitted sour cherry with rum can be put into a cake, as is done in Hungary, and the juice can be mixed with soda water for a refreshing drink. ..."

http://www.realbeer.com/news/articles/news-002828.php?rdf

Russian River, Allagash honored

Malt Advocate names RR its Brewery of the Year

"...The magazine, which honors mostly those in the world of whiskey, points to the range of beers made at the Santa Rosa, Calif., brewery. It cites Supplication, a brown ale aged for 12 months in pinot noir barrels, produced with sour cherries and wild bacteria and yeast; Beatification, a blond ale aged for 22 months in barrels acquired from New Belgium Brewing Co.; and Pliny the Elder, a beer that evolved from the first commercial Double IPA brewed in America. ..."

Examples of European Food Ingredient Companies:

http://www.serbianfruit.com/russian/news/fancy2.htm

Atle

Atle processes and exports high quality frozen fruit, including IQF , crumble, and brick. In partnership with more than 40 grower cooperatives, Atle has earned a reputation for reliability and managing fruit quality. The Atle line includes raspberry, plum, sour cherry, strawberry, black currant, red currant, wild blueberry, and blackberry. Atle is one of Serbia 's most highly regarded frozen fruit dealers.

ML Valjevo

ML Valjevo , a trusted supplier of frozen fruits, is pleased to launch a new line of aseptic, high quality fruit products for the food processing industry. Additionally, the company is offering new retail products including juices, fruit preserves, compotes, frappes, fruit toppings and spreads. The ML line uses select raspberries, blackberries, wild blueberries, sour cherries, red currants, and strawberries.

Donimpex

For five generations, Donimpex has supplied fruits and vegetable products to regional markets. Products include fresh, frozen and dried produce. Donimpex's cherries in alcohol have won several awards.

http://www.siepa.sr.gov.yu/attach/FruitIndustryInSerbia.pdf

Fruit Industry in Serbia

"Both sour cherries and sweet cherries are represented well in Serbia. With more than 1.8 million sweet cherry trees and almost 9 million sour cherry trees, Serbia clearly has tradition and knowledge of growing cherries. More than 112 thousand tons of sour cherries and almost 31 thousand tons of sweet cherries were produced in Serbia in 2004. There is a significant trend of increase in the production of sour cherries in Serbia, since production in 2003 stood at almost 90 thousand tons and prior to that average annual production was around 75 thousand tons. Average yield per tree for sour cherries is about 12.6 kilograms and 16.8 kilograms for sweet cherries.

The vast majority of sour cherries grown in Serbia are of the Oblancinska variety. Other varieties present are Sumadinka and Burlat's Early. Sweet cherry varieties include Bing, Lambert, Lapins, Sweetheart, Stella, Asen's Early and Dragan's Yellow.

Apart from fresh, both sour and sweet cherries are consumed as preserves, jams, juices and liqueurs. Both are used in production of yoghurts, while sour cherries are also used in the sweets industry. Famous for its quality, cherries in liquor are suitable for liquor flavoured chocolates.

Out of total Serbia sour cherry exports 49% are frozen, 36% are fresh and 15% are canned."